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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,503	12/11/2003	Scott A. Flatness	7953-0017	9228

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MCCORMICK, PAULDING & HUBER LLP  
CITY PLACE II  
185 ASYLUM STREET  
HARTFORD, CT 06103

EXAMINER

SUERETH, SARAH ELIZABETH

ART UNIT

PAPER NUMBER

3749

MAIL DATE

DELIVERY MODE

06/09/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/733,503

**Applicant(s)**

FLATNESS ET AL.

**Examiner**

Sarah Suereth

**Art Unit**

3749

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 3/3/09.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 6-10 and 14-24 is/are pending in the application.
- 4a) Of the above claim(s) 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-9 and 14-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/3/09 has been entered.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. **Claims 1-4, 6-8, and 14-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over **U.S. Patent No. 5,494,004 to Hunter, Jr.** ("Hunter") (previously cited) in view of **U.S. Patent No. 5,090,087 to Hipple et al** ("Hipple")(newly cited).

**In particular, in regard to at least claim 1 and 14**, Hunter shows an apparatus for cleaning a surface within a vessel (interior surface of vessel wall 83), the apparatus comprising: an elongate combustion conduit (21 and 51) extending from an upstream end to a downstream end with an aperture (81) in a wall of a vessel (83) and positioned to direct a shock wave toward the surface (see abstract and note pulsed pressure waves and col. 6, lines 38-54); and a plurality of moveable supports (each of supports 153R, 151R, 155 and 153F, 151F, 155) supporting weight of the combustion conduit (at least portion 51) at a plurality of location along a length of the combustion conduit (note

multiple locations in Fig. 1). This apparatus in Hunter is considered to form the recited "industrial facility" of claim 14.

**In regard to at least claim 6**, the supports are considered to accommodate longitudinal expansion and/or contraction of the combustion conduit as recited, in the same manner as applicant's invention.

**In regard to at least claims 7 and 8**, the multiple legs, axles, and wheels of Hunter form at least one platform (131) which is clearly understood to form a trolley. Further, as the sections (51 and 21) are reasonably considered to form the recited combustion conduit, this trolley (131) serves to support at least one of the combustion conduit segments (51). The recitation that the combustion conduit comprises a plurality of separable segments that are each supported on one of a plurality of trolleys is considered met by simply duplicating the detonative cleaning assembly, show for instance in Fig. 1 of Hunter where each assembly is at least arranged adjacent another, for instance by adding another trolley (51) under the second conduit segment (21). In doing so, the collection assemblies would form the apparatus for cleaning a surface within a vessel including an elongate combustion conduit as formed by the collective combustion conduits of the assemblies. It has been held that mere duplication of parts has not patentable significance unless a new and unexpected result is produced. See MPEP 2144.04(VI)(B). Accordingly, in this case, merely duplicating the cleaning assembly of Hunter would be expected to provide for additional means for cleaning the interior of walls of the vessel (83).

Hunter does not disclose a resilient member resiliently restraining the combustion conduit against recoil forces (claims 1 and 14) nor the particular arrangement and structure of the resilient member (claims 2-4, 15-17, 21, 23, and 24). Hunter also does not disclose that the vessel being cleaned is a boiler or includes surfaces formed by a boiler tube bundle.

Hipple is cited to remedy the deficiencies in Hunter.

Hipple discloses a retractable lance device used to clean boiler tubes (col. 3, lines 45-47).

Hipple teaches surrounding the lance with a coiled spring (90). Hipple teaches that the spring may be a wave spring or a coil spring or other type of spring (col. 5, lines 23-27). Hipple also teaches that the spring provides the benefit of improving maintenance of the sootblower (col. 3 lines 9-11).

Therefore, in regard to claims 1-4, 6-8, and 14-24, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the cleaning apparatus of Hunter to incorporate the resilient restraining mechanism as suggested by Higgle, for the desirable purpose of improving the maintenance of the sootblower (col. 3 lines 9-11).

Regarding claim 4, although Higgle suggests using a compressed spring, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute a tension spring instead as a matter of obvious design choice, as Higgle suggests many different types of springs could be used.

Regarding claim 2, Higgle states that the spring is inside of a box (12), and the box is mounted to an opening in the boiler wall (col. 3, lines 56-61). Figure 3 shows the spring coupled to the wall opening.

6. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Hunter in view of Higgle** as applied to claim 1 above and further in view of **U.S. Patent No. 4,218,016 to Freund** ("Freund").

Hunter in view of Higgle teach substantially all the limitations of claim 9 with the exception of the recitation that the plurality of supports comprise a plurality of hangers.

Freund teaches a retractable cleaning device for the surfaces of boiler tubes (see abstract) that is considered analogous to applicant's invention and the cited prior art. In Freund, the cleaning device is formed by a moveable support (12) that, in lieu of a trolley assembly, is supported by multiple hanging roller assemblies (30 and 20). This hanging assemblies function to insert and retract lance tube (12) from the boiler (see at least col. 2, lines 25-44).

Therefore, in regard to claim 9, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to substitute the hanging roller assemblies taught in Freund for the trolley arrangement of Hunter as matter of simply substituting one movement mechanism for another for obtain the predictable result of advancing and retracing a cleaning device from a vessel.

***Response to Arguments***

7. Applicant's arguments have been fully considered but they are moot in view of the new grounds of rejection.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Suereth whose telephone number is (571)272-9061. The examiner can normally be reached on Mondays & Tuesdays 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven McAllister, can be reached (571) 272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sarah Suereth/



Application/Control Number:  
10/733,503  
Art Unit: 3749

Page 8

Examiner, Art Unit 3749

/Steven B. McAllister/

Supervisory Patent Examiner, Art Unit 3749